```
#include <stdio.h>
#include <stdlib.h>

typedef struct Node
{
   int data;
   struct Node *next;
} Node;

void insertAtBeginning(Node **head, int ele_data);
void insertAtEnd(Node **head, int ele_data);
void insert(Node **prev_node, int ele_data, int pos);
void PrintList(Node *next);

void insertAtBeginning(Node **head, int ele_data)
{
   Node *ele_node = (struct Node *)malloc(sizeof(Node));
   ele_node->data = ele_data;
   ele_node->next = *head;
   *head = ele_node;
}

void insertAtEnd(Node **head, int ele_data)
{
```

```
    Node *ele_node = (struct Node *)malloc(sizeof(Node));
    Node *last = *head;
    ele_node->data = ele_data;
    ele_node->next = NULL;
    if (*head == NULL)
    {
        *head = ele_node;
        return;
    }
    while (last->next != NULL)
        last = last->next;
    last->next = ele_node;
}

void insert(Node **head, int ele_data, int pos)
{
    if (*head == NULL)
    {
        printf("Cannot be NULL\n");
        return;
    }
    Node *temp = *head;
    Node *eleNode = (Node *)malloc(sizeof(Node));
    eleNode->data = ele_data;
```

```
    eleNode->next = NULL;
    while (--pos > 0)
    {
        temp = temp->next;
    }
    eleNode->next = temp->next;
    temp->next = eleNode;
}

void PrintList(Node *node)
{
    while (node != NULL)
    {
        printf("%d\n", node->data);
        node = node->next;
    }
}
int main()
{
    int ch, ele, pos;
    Node *head = NULL;
    while (ch != 5)
    {
        printf("Menu\n");
```

```
printf("1.insert at beginning\n");
printf("2.insert at a specific position\n");
printf("3.insert at end\n");
printf("4.Display linked list\n");
printf("5.Exit\n");
printf("Enter your choice\n");
scanf("%d", &ch);
switch (ch)
{
case 1:
{
   printf("Enter the data you want to insert at beginning\n");
   scanf("%d", &ele);
   insertAtBeginning(&head, ele);
   break;
}
case 2:
{
   printf("Enter the data and position at which you want to insert \n");
   scanf("%d%d", &ele, &pos);
   insert(&head, ele, pos);
   break;
}
case 3:
```

```
{
   printf("Enter the data you want to insert at end\n");
   scanf("%d", &ele);
   insertAtEnd(&head, ele);
   break;
}
case 4:
{

   printf("Created linked list is:\n");
   PrintList(head);
   break;
}
case 5:
{
   return 0;
   break;
}
case 6:
{
   printf("Invalid data!");
   break;
}
}
```

```
    }
    return 0;
}
```

```
Menu
1.insert at beginning
2.insert at a specific position
3.insert at end
4.Display linked list
5.Exit
Enter your choice
1
Enter the data you want to insert at beginning
1
Menu
1.insert at beginning
2.insert at a specific position
3.insert at end
4.Display linked list
5.Exit
Enter your choice
3
Enter the data you want to insert at end
3
Menu
1.insert at beginning
2.insert at a specific position
3.insert at end
4.Display linked list
5.Exit
Enter your choice
2
Enter the data and position at which you want to insert
2
1
Menu
1.insert at beginning
2.insert at a specific position
3.insert at end
4.Display linked list
5.Exit
Enter your choice
4
Created linked list is:
1
2
3
Menu
1.insert at beginning
2.insert at a specific position
3.insert at end
4.Display linked list
5.Exit
Enter your choice
5
```